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SEQUENCE LISTING

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B
<120> NUCLEIC ACIDS OF THE M ANTIGEN GENE OF
HISTOPLASMA CAPSULATUM, ANTIGENS, VACCINES, AND ANTIBODIES,
METHODS AND KITS FOR DETECTING HISTOPLASMOSIS

<130> 14114.0325U2

<140> 09/674,195

<141> 2000-10-26

<150> PCT/US99/09151

<151> 1999-04-27

Sub
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<150> 60/083,676

<151> 1998-04-30

<160> 13

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 3862

<212> DNA

<213> Histoplasma capsulatum

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 <212> PRT
 <213> Histoplasma capsulatum

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 35 40 45
 Ser Leu Lys Ala Gly Asn Arg Gly Pro Thr Leu Leu Glu Asp Phe Ile
 50 55 60
 Phe Arg Gln Lys Ile Gln His Phe Asp His Glu Arg Val Pro Glu Arg
 65 70 75 80
 Ala Val His Ala Arg Gly Ala Gly Ala His Gly Val Phe Thr Ser Tyr
 85 90 95
 Asn Asn Trp Ser Asn Ile Thr Ala Ala Ser Phe Leu Asn Ala Ala Gly
 100 105 110
 Lys Gln Thr Pro Val Phe Val Arg Phe Ser Thr Val Ala Gly Ser Arg
 115 120 125
 Gly Ser Val Asp Ser Ala Arg Asp Ile His Gly Phe Ala Thr Arg Leu
 130 135 140
 Tyr Thr Asp Glu Gly Asn Phe Asp Ile Val Gly Asn Asn Val Pro Val
 145 150 155 160
 Phe Phe Ile Gln Asp Ala Ile Gln Phe Pro Asp Leu Ile His Ala Val
 165 170 175
 Lys Pro Gln Pro Asp Ser Glu Ile Pro Gln Ala Ala Thr Ala His Asp
 180 185 190
 Thr Ala Trp Asp Phe Leu Ser Gln Pro Ser Ser Leu His Ala Leu
 195 200 205
 Phe Trp Ala Met Ser Gly His Gly Ile Pro Arg Ser Met Arg His Val
 210 215 220
 Asp Gly Trp Gly Val His Thr Phe Arg Leu Val Thr Asp Glu Gly Asn
 225 230 235 240
 Ser Thr Leu Val Lys Phe Arg Trp Lys Thr Leu Gln Gly Arg Ala Gly
 245 250 255
 Leu Val Trp Glu Glu Ala Gln Ala Leu Gly Gly Lys Asn Pro Asp Phe
 260 265 270
 His Arg Gln Asp Leu Trp Asp Ala Ile Glu Ser Gly Arg Tyr Pro Glu
 275 280 285
 Trp Glu Leu Gly Phe Gln Leu Val Asn Glu Ala Asp Gln Ser Lys Phe
 290 295 300
 Asp Phe Asp Leu Leu Asp Pro Thr Lys Ile Ile Pro Glu Glu Leu Val
 305 310 315 320
 Pro Phe Thr Pro Ile Gly Lys Met Val Leu Asn Arg Asn Pro Lys Ser
 325 330 335
 Tyr Phe Ala Glu Thr Glu Gln Ile Met Phe Gln Pro Gly His Val Val
 340 345 350
 Arg Gly Ile Asp Phe Thr Asp Asp Pro Leu Leu Gln Gly Arg Leu Tyr
 355 360 365

Ser Tyr Leu Asp Thr Gln Leu Asn Arg His Gly Gly Pro Asn Phe Glu
 370 375 380
 Gln Leu Pro Ile Asn Arg Pro Arg Ile Pro Phe His Asn Asn Asn Arg
 385 390 395 400
 Asp Gly Ala Gly Gln Met Phe Ile Pro Leu Asn Thr Ala Ala Tyr Thr
 405 410 415
 Pro Asn Ser Met Ser Asn Gly Phe Pro Gln Gln Ala Asn Arg Thr His
 420 425 430
 Asn Arg Gly Phe Phe Thr Ala Pro Gly Arg Met Val Asn Gly Pro Leu
 435 440 445
 Val Arg Glu Leu Ser Pro Ser Phe Asn Asp Val Trp Ser Gln Pro Arg
 450 455 460
 Leu Phe Tyr Asn Ser Leu Thr Val Phe Glu Lys Gln Phe Leu Val Asn
 465 470 475 480
 Ala Met Arg Phe Glu Asn Ser His Val Arg Ser Glu Thr Val Arg Lys
 485 490 495
 Asn Val Ile Ile Gln Leu Asn Arg Val Asp Asn Asp Leu Ala Arg Arg
 500 505 510
 Val Ala Leu Ala Ile Gly Val Glu Pro Pro Ser Pro Asp Pro Thr Phe
 515 520 525
 Tyr His Asn Lys Ala Thr Val Pro Ile Gly Thr Phe Gly Thr Asn Leu
 530 535 540
 Leu Arg Leu Asp Gly Leu Lys Ile Ala Leu Leu Thr Arg Asp Asp Gly
 545 550 555 560
 Ser Phe Thr Ile Ala Glu Gln Leu Arg Ala Ala Phe Asn Ser Ala Asn
 565 570 575
 Asn Lys Val Asp Ile Val Leu Val Gly Ser Ser Leu Asp Pro Gln Arg
 580 585 590
 Gly Val Asn Met Thr Tyr Ser Gly Ala Asp Gly Ser Ile Phe Asp Ala
 595 600 605
 Val Ile Val Val Gly Gly Leu Leu Thr Ser Ala Ser Thr Gln Tyr Pro
 610 615 620
 Arg Gly Arg Pro Leu Arg Ile Ile Thr Asp Ala Tyr Ala Tyr Gly Lys
 625 630 635 640
 Pro Val Gly Ala Val Gly Asp Gly Ser Asn Glu Ala Leu Arg Asp Val
 645 650 655
 Leu Met Ala Ala Gly Gly Asp Ala Ser Asn Gly Leu Asp Gln Pro Gly
 660 665 670
 Val Tyr Ile Ser Asn Asp Val Ser Glu Ala Tyr Val Arg Ser Val Leu
 675 680 685
 Asp Gly Leu Thr Ala Tyr Arg Phe Leu Asn Arg Phe Pro Leu Asp Arg
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 Ser Leu Val
 705

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<213> Histoplasma capsulatum

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<210> 4
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B1
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<210> 6
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<213> Histoplasma capsulatum

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<210> 7
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<212> PRT
<213> Histoplasma capsulatum

<400> 7
Ser Gly Arg Tyr Pro Glu
1 5

<210> 8
<211> 10
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<400> 8
Phe Asp Phe Asp Leu Leu Asp Pro Thr Lys
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<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; M antigen-specific oligonucleotide

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<210> 10
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; sense amplification primer

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<220>
<221> misc_feature
<222> 6, 12, 15
<223> y = c or t

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<221> misc_feature
<222> 9
<223> v = g, c or a

<400> 10
aaraayccvg aytty

<210> 11
<211> 14
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; anti-sense amplification primer

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<222> 3, 9
<223> n = g, a, c or t(u)

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14

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<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; sense cDNA amplification primer

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22

<210> 13
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence; anti-sense cDNA amplification primer

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27